

Appl. No.: 09/724,691
Amdt. Dated: 04/29/2004
Off. Act. Dated: 01/29/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-17 (cancelled)

18. (Previously Presented): A method of controlling blood flow to a plurality of renal arteries via their respective renal ostia at unique relative locations along an abdominal aorta in a patient, comprising:

- a) providing a catheter comprising
 - i) an elongated shaft with a proximal end portion and a distal end portion that is adapted to be positioned at a location within the abdominal aorta associated with the renal ostia;
 - ii) a tubular member on the distal end portion having an interior passageway which is radially expandable within the abdominal aorta at the location, and which is configured to extend within the abdominal aorta upstream and downstream of the renal ostia; and
 - iii) a radially expandable member on the tubular member, having an expanded configuration with an outer diameter larger than an outer diameter of the tubular member and which is configured to decrease the blood flow in the outer blood flow stream downstream of the renal ostia;
- b) advancing the distal end portion to the location within the patient's abdominal aorta, so that an upstream end of the tubular member is upstream of the renal ostia and the radially expandable member is downstream of the renal ostia;

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- c) expanding the tubular member to separate blood flow through the abdominal aorta into an outer blood flow stream exterior to the tubular member and an inner blood flow stream within the interior passageway of the tubular member; and
- d) expanding the radially expandable member to the expanded configuration to thereby decrease the blood flow in the outer blood flow stream downstream of the renal ostia.

19. (Previously Presented): The method of claim 18, further comprising:
expanding the radially expandable member into contact with a wall of the abdominal aorta to substantially occlude the outer blood flow stream downstream of the renal ostia.

20. (Previously Presented): The method of claim 18, further comprising:
expanding the radially expandable member to an outer diameter which does not completely occlude the outer blood flow stream downstream of the renal ostia.

Claims 21-22 (Cancelled)

23. (new): The method of claim 18, wherein the catheter used according to the method further comprises:

a fluid agent delivery system that is adapted to couple to a source of fluid agent located externally of the patient and cooperating with the tubular member and radially expandable member so as to deliver a volume of the fluid agent from the source and into the outer blood flow stream.

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24. (new): The method of claim 23, wherein the fluid agent delivery system comprises:

at least one lumen extending along the elongated shaft and in fluid communication with a distal agent delivery port located along the distal end portion and a proximal agent delivery port located along the proximal end portion, and wherein the radially expandable member is downstream of the agent delivery port.

25. (new): The method of claim 24, wherein the tubular member has an upstream end located upstream of the distal agent delivery port.

26. (new): The method of claim 24, wherein the tubular member has a distal end located distal to the distal agent delivery port.

27. (new): The method of claim 24, wherein the distal agent delivery port is a lateral port in a side wall of the shaft.

28. (new): The method of claim 18, wherein the tubular member comprises a braided tube having a sheath.

29. (new): The method of claim 18, wherein the catheter used according to the method further comprises:

a pull line having a distal end attached to the tubular member, and wherein the interior passageway of the tubular member is radially expanded by proximally retracting the pull line.

30. (new): The method of claim 18, wherein the tubular member is self expanding.

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31. (new): The method of claim 30, wherein the tubular member comprises a radially collapsible frame having a sheath.

32. (new): The method of claim 18, wherein the interior passageway of the tubular member has an expanded inner diameter of between about 30 mm to about 130 mm.

33. (new): The method of claim 18, wherein the interior passageway of the tubular member has an unexpanded inner diameter configured to expand to an expanded inner diameter, wherein the expanded inner diameter is between about 1000% to about 6000% larger than the unexpanded inner diameter.